

**EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION**

**REGARDING PROPOSED CHANGES TO THE
NEXT TRIENNIAL EDITION
OF THE CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 2**

LEGEND FOR EXPRESS TERMS

1. Existing California amendments or code language being modified: All such language appears in *italics*, modified language is underlined.
2. New California amendments: All such language appears underlined and in italics.
3. Repealed text: All such language appears in ~~strikeout~~.
4. Preemptive repealed text for all applications, uses or occupancies in California: All such language appears in ~~strikeout~~ and shaded.

EXPRESS TERMS

[SDLF]

BUILDING STANDARDS IN 2001 CBC PROPOSED FOR REPEAL

SECTION 213 – L

Light-Frame Construction ~~is a type of construction whose vertical and horizontal structural elements are primarily framed by a system of repetitive wood or light gauge steel framing members, and which does not use structural concrete as floor or roof diaphragm.~~

~~1611.7.1 . . .~~

~~1611.7.2 [For BSC]~~ All roofs shall be designed with sufficient slope or camber to ensure adequate drainage after the long term deflection from dead load or shall be designed to resist ponding load, P, combined in accordance with Section 1612.2 or 1612.3. Ponding load shall include water accumulation from any source, including snow, due to deflection. See Section 1506 and Table 16-C, Footnote 3, for drainage slope. See Section 1613 for deflection criteria.

~~1612.3.2.1 . . .~~

~~1612.3.2.2 [For BSC]~~ In lieu of the basic load combinations specified in Section 1612.3.1, structures and portions thereof shall be permitted to be designed for the most critical effects resulting from the following load combinations. When using these alternate basic load combinations, a one third increase shall be permitted in allowable stresses for all combinations including W or E but not concurrent with the duration of load increase permitted in Division III of Chapter 23.

D + L + (L_r or S)	(12-12)
D + L + (W or E/1.4)	(12-13)
D + L + W + S/2	(12-14)
D + L + S + W/2	(12-15)
D + L + S + E/1.4	(12-16)
0.9D ± E/1.4	(12-16.1)

EXCEPTIONS: 1. _____ Crane hook loads need not be combined with roof live load or with more than three fourths of the snow load or one half of the wind load.

2. _____ Design snow loads of 30 psf (1.44 kN/m²) or less need not be combined with seismic loads. Where design snow loads exceed 30 psf (1.44 kN/m²), the design snow load shall be included with seismic loads, but may be reduced up to 75 percent where consideration of siting, configuration and load duration warrant when approved by the building official.

1629.4.2.1 . . .

1629.4.2.2 [For BSC] In Seismic Zone 4, each site shall be assigned a near source factor in accordance with Table 16-S and the Seismic Source Type set forth in Table 16-U. The value of N_a used in determining C_a need not exceed 1.1 for structures complying with all the following conditions:

1. The soil profile type is S_A , S_B , S_C or S_D .
2. $\rho = 1.0$.
3. Except in single story structures, Group R, Division 3 and Group U, Division 1 Occupancies, moment frame systems designated as part of the lateral force resisting system shall be special moment resisting frames.
4. ~~*** The provisions in Sections 9.6a and 9.6b of AISC – Seismic Part 1 shall not apply, except for columns in one-story buildings or columns at the top story of multistory buildings.~~
5. None of the following structural irregularities is present: Type 1, 4 or 5 of Table 16-L, and Type 1 or 4 of Table 16-M.

1630.2.3.3 [For BSC] Distribution . . .

1630.2.3.3.1 . . .

1630.2.3.3.2 [For BSC] Horizontal Distribution. ~~Diaphragms constructed of untopped steel decking or wood structural panels or similar light frame construction are permitted to be considered as flexible.~~

1630.4.2.1 . . .

1630.4.2.2 [For BSC] The value of R used in the design of any story shall be less than or equal to the value of R used in the given direction for the story above.

EXCEPTION: This requirement need not be applied to a story where the dead weight above that story is less than 10 percent of the total dead weight of the structure.

Structures may be designed using the procedures of this section under the following conditions:

1. The entire structure is designed using the lowest R of the lateral force resisting systems used, or
2. The following two-stage static analysis procedures may be used for structures conforming to Section 1629.8.3, Item 4:
 - 2.1 The flexible upper portion shall be designed as a separate structure, supported laterally by the rigid lower portion, using the appropriate values of R and ρ .
 - 2.2 The rigid lower portion shall be designed as a separate structure using the appropriate values of R and ρ . The reactions from the upper portion shall be those determined from the analysis of the upper portion multiplied by the ratio of the (R/ρ) of the upper portion over (R/ρ) of the lower portion. ~~This ratio shall not be taken less than 1.0.~~

1630.8.2.1.1 . . .

1630.8.2.1.2 [For BSC] Where any portion of the lateral load resisting system is discontinuous, such as for vertical irregularity Type 4 in Table 16-L or plan irregularity Type 4 in Table 16-M, concrete, masonry, steel and wood elements (*i.e.* columns, beams, trusses or slabs) supporting such discontinuous systems shall have the design strength to resist the combination loads resulting from the special seismic load combinations of Section 1612.4. ~~The Connections of such discontinued elements to the supporting members shall be adequate to transmit the forces for which the discontinuous elements were required to be designed.~~

EXCEPTIONS: 1. The quantity E_m in Section 1612.4 need not exceed the maximum force that can be transferred to the element by the lateral force resisting system.

2. Concrete slabs supporting light frame wood shear wall systems or light frame steel and wood structural panel shear wall systems.

For Allowable Stress Design, the design strength may be determined using an allowable stress increase of 1.7 and a

resistance factor, Φ , of 1.0. This increase shall not be combined with the one third stress increase permitted by Section 1612.3, but may be combined with the duration of load increase permitted in Chapter 23, Division III.

1630.8.2.2.1 . . .

1630.8.2.2.2 [For BSC] In Seismic Zones 3 and 4, elements supporting discontinuous systems shall meet the following detailing or member limitations:

1. Reinforced concrete or reinforced masonry elements designed primarily as axial load members shall comply with Section 1921.4.4.5.

2. Reinforced concrete elements designed primarily as flexural members and supporting other than light frame wood shear wall systems or light frame steel and wood structural panel shear wall systems shall comply with Sections 1921.3.2 and 1921.3.3. Strength computations for portions of slabs designed as supporting elements shall include only those portions of the slab that comply with the requirements of these Sections.

3. Masonry elements designed primarily as axial load carrying members shall comply with Sections 2106.1.12.4, Item 1, and 2408.2.6.2.6.

4. Masonry elements designed primarily as flexural members shall comply with Section 2408.2.6.2.5.

5. ***

6. Steel elements designed primarily as flexural members or trusses shall have bracing for both top and bottom beam flanges or chords at the location of the support of the discontinuous system and shall comply with the requirements of *** *AISC Seismic Part I, Section 9.4b.*

7. Wood elements designed primarily as flexural members shall be provided with lateral bracing or solid blocking at each end of the element and at the connection location(s) of the discontinuous systems.

Section 1628 – Symbols and Notations . . .

R = numerical coefficient representative of the inherent overstrength and global ductility capacity of lateral-force-resisting systems, as set forth in Table 16-N *[For BSC] Table 16-N.1* or 16-P.

...

Ω = Seismic Force Amplification Factor, which is required to account for structural overstrength and set forth in Table 16-N *[For BSC] Table 16-N.1.*

1629.6.1 General. Structural systems shall be classified as one of the types listed in Table 16-N *[For BSC] Table 16-N.1* and defined in this section.

1629.6.7 Undefined structural system. A structural system not listed in Table 16-N *[For BSC] Table 16-N.1.*

1629.7 Height Limits. Height limits for the various structural systems in Seismic Zones 3 and 4 are given in Table 16-N *[For BSC] Table 16-N.1.*

EXCEPTION: Regular structures may exceed these limits by not more than 50 percent for unoccupied structures, which are not accessible to the general public.

1629.8.3 Static. . . .

2. Regular structures under 240 feet (73 152 mm) in height with lateral force resistance provided by systems listed in Table 16-N *[For BSC] Table 16-N.1*, except where Section 1629.8.4, Item 4, applies. . . .

1629.9.2 Undefined structural systems. For undefined structural systems not listed in Table 16-N *[For BSC] Table 16-N.1*, the coefficient R shall be substantiated by approved cyclic test data and analysis.

~~1630.2.3.5~~ 1630.2.3.4 Applicability. . . .

Where used, ΔM shall be taken equal to 0.01 times the story height of all stories. In Section 1633.2.9, Formula (33-1) shall read

$F_{px} = 3.0 C_a R w_{px}$ and need not exceed $1.0 C_a w_{px}$, but shall not be less than $0.5 C_a w_{px}$. R and Ω_o shall be taken from Table 16-N ~~For BSC Table 16-N.1~~.

1630.3.1 Determination of Ω_o . For specific elements of the structure, as specifically identified in this code, the minimum design strength shall be the product of the seismic force overstrength factor Ω_o and the design seismic forces set forth in Section 1630. For both Allowable Stress Design and Strength Design, the Seismic Force Overstrength Factor, Ω_o , shall be taken from Table 16-N ~~For BSC Table 16-N.1~~.

1630.3.2 Determination of R . The notation R shall be taken from Table 16-N ~~For BSC Table 16-N.1~~.

1633.2.1 General. Four types of general building framing systems defined in Section 1629.6 are recognized in these provisions and shown in Table 16-N ~~For BSC Table 16-N.1~~. Each type is subdivided by the types of vertical elements used to resist lateral seismic forces. Special framing requirements are given in this section and in Chapters 19 through 23.

1634.2 Lateral Force. Lateral-force procedures for nonbuilding structures with structural systems similar to buildings (those with structural systems which are listed in Table 16-N ~~For BSC Table 16-N.1~~) shall be selected in accordance with the provisions of Section 1629. . . .

TABLE 16.1-N — [For BSC] STRUCTURAL SYSTEMS¹

BASIC STRUCTURAL SYSTEM ²	LATERAL FORCE-RESISTING SYSTEM DESCRIPTION	<i>R</i>	Ω_o	HEIGHT LIMIT FOR SEISMIC ZONES 3 AND 4 (feet) x 304.8 for mm
1. Bearing wall system	1. Light framed walls with shear panels — a. Wood structural panel walls for structures three stories or less — b. All other light framed walls 2. Shear walls — a. Concrete — b. Masonry 3. Light steel-framed bearing walls with tension-only bracing 4. Braced frames where bracing carries gravity load — a. Steel — b. Concrete ³ — c. Heavy timber	5.5 4.5 4.5 4.5 2.8 4.4 2.8 2.8	2.8 2.8 2.8 2.8 2.2 2.2 2.2 2.2	65 65 160 160 65 160 — 65
2. Building frame system	1. Steel eccentrically braced frame (EBF) 2. Light framed walls with shear panels: — a. Wood structural panel walls for structures three stories or less — b. All other light framed walls 3. Shear walls — a. Concrete — b. Masonry 4. Ordinary braced frames — a. Steel ⁶ — b. Concrete ³ — c. Heavy timber 5. Special concentrically braced frames — a. Steel	7.0 6.5 5.0 5.5 5.5 ***5 5.6 5.6 6.4	2.8 2.8 2.8 2.8 2.8 ***2 2.2 2.2 2.2	240 65 65 240 160 35 ⁶ — 65 240
3. Moment resisting frame system	1. Special moment resisting frame (SMRF) — a. Steel — b. Concrete ⁴ 2. Masonry moment resisting wall frame (MMRWF) 3. Intermediate moment resisting frame (IMRF) a. Steel ⁶ b. Concrete ⁵ 4. Ordinary moment resisting frame (OMRF) — a. Steel ⁶ — b. Concrete ⁷ 5. Special truss moment frames of steel (STMF)	8.5 8.5 6.5 ***4.5 ***5.5 ***3.5 3.5 6.5	2.8 2.8 2.8 ***2.8 ***2.8 ***2.8 2.8 2.8	N.L. N.L. 160 ***35 ⁶ = = 240

4. Dual systems	1. Shear walls			
	— a. Concrete with SMRF	8.5	2.8	N.L.
	— b. Concrete with steel OMRF (<i>Not Permitted</i>)	4.2	2.8	160
	— c. Concrete with concrete IMRF ⁵	6.5	2.8	160
	— d. Masonry with SMRF	5.5	2.8	160
	— e. Masonry with steel OMRF (<i>Not Permitted</i>)	4.2	2.8	160
	— f. Masonry with concrete IMRF ³	4.2	2.8	—
	— g. Masonry with masonry MMRWF	6.0	2.8	160
	2. Steel EBF			
	— a. With steel SMRF	8.5	2.8	N.L.
	— b. With steel OMRF (<i>Not Permitted</i>)	4.2	2.8	160
	3. Ordinary braced frames (<i>Not Permitted</i>)			
	— a. Steel with steel SMRF	6.5 ^{***}	2.8 ^{***}	N.L.
	— b. Steel with steel OMRF	4.2 ^{***}	2.8 ^{***}	160
	— c. Concrete with concrete SMRF ³	6.5 ^{***}	2.8 ^{***}	—
	— d. Concrete with concrete IMRF ³	4.2 ^{***}	2.8 ^{***}	—
5. Cantilevered column building systems	4. Special concentrically braced frames			
	— a. Steel with steel SMRF	7.5	2.8	N.L.
	— b. Steel with steel OMRF (<i>Not Permitted</i>)	4.2 ^{***}	2.8 ^{***}	160
	5. Steel IMRF (<i>Not permitted</i>)	—	—	—
	1. Cantilevered column elements	2.2	2.0	35 ⁷
6. Shear wall frame interaction systems	1. Concrete ⁸	5.5	2.8	160
7. Undefined systems	See Section 1629.6.7 and 1629.9.2	—	—	—

N.L. — no limit

¹ See Section 1630.4 for combination of structural systems.

² Basic structural systems are defined in Section 1629.6.

³ Prohibited in Seismic Zones 3 and 4.

⁴ Includes precast concrete conforming to Section 1921.2.7.

⁵ Prohibited in Seismic Zones 3 and 4, except as permitted in Section 1634.2.

⁶ *** Unless otherwise approved by the enforcement agency, in Seismic Zone 4:

^{6.1} Steel IMRF are permitted for buildings 35 ft. or less in height and the dead load of the roof, walls or floors not exceeding 35 psf each; or for single-story buildings 60 ft. or less in height with dead load of the roof or walls not exceeding 15 psf each where the moment joints of field connections are constructed of bolted end plates; or single-family dwellings using light frame construction with $R = 3.0$ and $\Omega_s = 2.2$.

^{6.2} Steel OMRF are permitted for buildings 35 ft or less in height with the dead load of the roof, walls or floors not exceeding 15 psf each; or single-story buildings 60 ft or less in height with the dead load of the roof or walls not exceeding 15 psf each and where the moment joints of field connections are constructed of bolted end plates.

^{6.3} Steel Ordinary Braced Frames are permitted for buildings 35 ft or less in height; or penthouse structures; or single-story buildings 60 ft or less in height with the dead load of the roof or walls not exceeding 15 psf. each.

⁷ Total height of the building including cantilevered columns.

⁸ Prohibited in Seismic Zones 2A, 2B, 3 and 4. See Section 1633.2.7.

TABLE 16-O—HORIZONTAL FORCE FACTORS, a_p AND R_p

ELEMENTS OF STRUCTURES AND NONSTRUCTURAL COMPONENTS AND EQUIPMENT ¹	a_p	R_p	FOOTNOTE
...			
D. Storage racks (include contents) <i>with upper storage level more than 5 feet (1524 mm) in height</i> [For BSC]	2.5	4.0	*** 4.1
...			
G. Access floor systems. [For BSC]	1.0	3.0	*** 4.1, 5, 9
...			

...

^{4.1} **[For BSC]** Ground supported steel storage racks may be designed using the provisions of Section 1634, Chapter 22A, Division X, may be used for design, provided seismic design forces are equal to or greater than those specified in Section 1632.2 or 1634.2, as appropriate.

...

1665.2.3.1...

1665.2.3.2 [For BSC] The following sequence of tests shall be performed for the prescribed number of cycles at a vertical load equal to the average $D + 0.5L$ on all isolator units of a common type and size:

1. Twenty fully reversed cycles of loading at a lateral force corresponding to the wind design force.
2. Three fully reversed cycles of loading at each of the following increments of displacement: $0.2 D_D$, $0.5 D_D$ and $1.0 D_D$, $1.0 D_{MF}$.
3. Three fully reversed cycles at the total maximum displacement, $1.0 D_{TM}$.
4. $(15C_{VD}/C_{AD}B_D)$, but not less than 10, fully reversed cycles of loading at 1.0 times the total design displacement, $1.0 D_{TD}$.

1665.4.1...

1665.4.2 [For BSC] The performance of the test specimens shall be assessed as adequate if the following conditions are satisfied:

1. The force-deflection plots of all tests specified in Section 1665.2 have a positive incremental force-carrying capacity.
2. For each increment of test displacement specified in Section 1665.2.3, Item 2, and for each vertical load case specified in Section 1665.2.3:
 - 2.1 There is no greater than a plus or minus 10 percent difference between the effective stiffness at each of the three cycles of test and the average value of effective stiffness for each test specimen.
 - 2.2 There is no greater than a 10 percent difference in the average value of effective stiffness of the two test specimens of a common type and size of the isolator unit over the required three cycles of test.
3. For each specimen there is no greater than a plus or minus 20 percent change in the initial effective stiffness of each test specimen over the $(15C_{VD}/C_{AD}B_D)$, but not less than 10, cycles of the test specified in Section 1665.2.3, Item 4.
4. For each specimen there is no greater than a 20 percent decrease in the initial effective damping over for the $(15C_{VD}/C_{AD}B_D)$, but not less than 10, cycles of the test specified in Section 1665.2.3, Item 4.
5. All specimens of vertical load-carrying elements of the isolation system remain stable at the total maximum displacement for static load as prescribed in Section 1665.2.6.

...

1809.5.1.1...

1809.5.1.2 [For BSC] Piles, caissons and caps shall be designed according to the provisions of Section 1605, including the effects of lateral displacements. Special detailing requirements as described in Section 1809.5.2 shall apply for a length of piles equal to 120 percent of the flexural length. Flexural length shall be considered as a length of pile from the first point of zero lateral deflection to the underside of the pile cap or grade beam.

1903.11.1 . . .

1903.11.2 [For BSC] Recommended Practice for Glass Fiber Reinforced Concrete Panels, *PCI Manual 128*.

1915.2.2.1 . . .

1915.2.2.2 [For BSC] Base area of footing or number and arrangement of piles shall be determined from the external forces and moments (transmitted by footing to soil or piles) and permissible soil pressure or permissible pile capacity selected through principles of soil mechanics. External forces and moments are those resulting from ~~*** the load combinations of Section 1612.3.~~

1921.2.1.7 In structures having precast gravity systems, the lateral-force-resisting system shall be one of the systems listed in Table 16-N ~~[For BSC] Table 16-N.1~~ and shall be well distributed using one of the following methods: . . .

1928.1.2.3.1 . . .

1928.1.2.3.2 [For BSC] When permitted by Section 1928.1, structures, components and foundations shall be designed so that their design strength exceeds the effects of the factored loads in the following combinations:

1. ~~1.4D~~
2. ~~1.2D + 1.6L + 0.5(L_r or S or R)~~
3. ~~1.2D + 1.6(L_r or S or R) + (0.5L or 0.8W)~~
4. ~~1.2D + 1.3W + 0.5L + 0.5(L_r or S or R)~~
5. ~~1.2D ± *** 1.0E + (0.5L or 0.2S)~~
6. ~~0.9D ± (1.3W or *** 1.0E)~~

EXCEPTIONS: 1. The load factor on L in combinations 3, 4 and 5 shall equal 1.0 for garages, areas occupied and places of public assembly, and all areas where the live load is greater than 100 lb./ft.² (pounds force per square foot) (4.79 kPa).

2. Each relevant strength limit state shall be considered. The most unfavorable effect may occur when one or more of the contributing loads are not acting.

2108.2.6.2.6.1 . . .

2108.2.6.2.6.2 [For BSC] The requirements set forth in this subsection apply to piers proportioned to resist flexure in conjunction with axial loads.

1. Longitudinal reinforcement. A minimum of four longitudinal bars shall be provided at all sections of every pier.

Flexural reinforcement shall be distributed across the member depth. Variation in reinforcement area between reinforced cells shall not exceed 50 percent.

Minimum reinforcement ratio calculated over the gross cross section shall be 0.002.

Maximum reinforcement ratio calculated over the gross cross section shall be $0.15f_c/f_y$.

Maximum bar diameter shall be one eighth nominal width of the pier.

2. Transverse reinforcement. Transverse reinforcement shall be hooked around the extreme longitudinal bars with standard 180-degree hook as defined in Section 2108A.2.2.4.

Within an end region extending one pier depth from the end of the beam, and at any region at which flexural yielding may occur during seismic or wind loading, the maximum spacing of transverse reinforcement shall not exceed one fourth the nominal depth of the pier.

The maximum spacing of transverse reinforcement shall not exceed one half the nominal depth of the pier. The minimum transverse reinforcement ratio shall be 0.0015.

3. Lateral reinforcement. Lateral reinforcement shall be provided to confine the grouted core when compressive strains due to axial and bending forces exceed 0.0015, corresponding to factored forces with R equal to 1.0. The unconfined portion of the cross section with strain exceeding 0.0015 shall be neglected in computing the nominal strength of the section.

...(Section unchanged except as noted above)

2204.1.1 . . .

2204.1.2 [For BSC] Steel design based on load and resistance factor design method shall resist the factored load combinations of section 1612.2 in accordance with the applicable requirements of section 2205. * * *

2204.2.1 . . .

2204.2.2 [For BSC] Steel design based on allowable stress design methods shall resist the factored load combinations of section 1612.3 in accordance with the applicable requirements of section 2205. * * *

Division IV – SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS

NOTE: ~~This division shall not apply to applications regulated by the Building Standards Commission as referenced in Section 101.17.3. See Chapter 22B, Division IV.~~

Division V – SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS FOR USE WITH ALLOWABLE STRESS DESIGN

NOTE: ~~This division shall not apply to applications regulated by the Building Standards Commission as referenced in Section 101.17.3 See Chapter 22, Division V~~

CHAPTER 23 – WOOD

Division III – DESIGN SPECIFICATIONS FOR ALLOWABLE STRESS DESIGN OF WOOD BUILDINGS

Part I – ALLOWABLE STRESS DESIGN OF WOOD

~~**[For BSC]** For applications regulated by the Building Standards Commission as referenced in section 101.17.3 this standard, with certain exceptions, is the ANSI/AF&PA NDS-01 National Design Specification for Wood Construction of the American Forest and Paper Association, 2001 Edition, and the Supplement to the 2001 Edition, National Design Specification, adopted by reference.~~

2316.1.1 . . .

~~**2316.1.2 [For BSC]** The National Design Specification for Wood Construction, 2001 Edition (NDS), as amended by Section 2316.3, which is hereby adopted as a part of this code, shall apply to the allowable stress design and construction of wood structures. The Supplement to the 2001 Edition National Design Specification, is specifically adopted and made a part of this standard.~~

~~Where a code, standard or specification referred to in this code conflict with a code, standard or specification referenced in the NDS-01 for allowable stress design of wood building, the NDS-01 shall prevail.~~

2316.2 Amendments.

~~Note: The provisions of this section shall not apply to applications regulated by the Building Standards Commission as referenced in section 101.17.3.~~

2316.3 [For BSC] Amendments.

1. [For BSC] Sec. 2.2. Add a fourth sentence as follows:

~~Values for species and grades not tabulated shall be submitted to the enforcing agency for approval.~~

2. [For BSC] Sec. 2.3.2.1. In fourth sentence, delete “or Figure B1 (see Appendix B).”

3. [For BSC] Sec. 2.3.2.3. Delete and substitute the following:

~~**2.3.2.3** When using Section 1612.3.1 basic load combinations, the Load Duration Factor, C_D , noted in Table 2.3.2 shall be permitted to be used. When using Section 1612.3.2 alternate load combinations, the one-third increase shall not be used concurrently with the Load Duration Factor, C_D .~~

4. [For BSC] Table 2.3.2. Delete and substitute as follows:

TABLE 2.3.2 LOAD DURATION FACTORS, C_D

DESIGN LOAD	LOAD DURATION	C_D
Dead Load	Permanent	0.9
Floor, Occupancy Live Load	Ten Years	1.0
Snow Load	Two Months	1.15
Roof Live Load	Seven Days	1.25
Earthquake Load [†]	—	1.33
Wind Load [‡]	—	1.33
Impact	—	2.0

[†] 1.60 may be used for nailed and bolted connections exhibiting Mode III or IV behavior, except that the increases for earthquake are not combined with the increase allowed in Section 1612.3. The 60-percent increase for nailed and bolted connections exhibiting Mode III or IV behavior for earthquake shall not be applicable to joist hangers, framing anchors, and other mechanical fastenings, including straps and hold-down anchors. The 60-percent increase shall not apply to the allowable shear values in Tables 23-II-H, 23-II-I-1, 23-II-I-2, 23-II-J or in Section 2315.3.

[‡] 1.60 may be used for members and nailed and bolted connections exhibiting Mode III or IV behavior, except that the increases for wind are not combined with the increase allowed in Section 1612.3. The 60-percent increase shall not apply to the allowable shear values in Tables 23-II-H, 23-II-I-1, 23-II-I-2, 23-II-J or in Section 2315.3.

5. [For BSC] Sec. 2.3.3. Add a second paragraph following Table 2.3.3:

The allowable unit stresses for fire-retardant treated solid-sawn lumber and plywood, including fastener values, subject to prolonged elevated temperatures from manufacturing or equipment processes, but not exceeding 150 °F (66 °C), shall be developed from approved test methods that properly consider potential strength-reduction characteristics, including effects of heat and moisture.

6. [For BSC] Sec. 2.3.4. Add second, third and fourth paragraphs as follows:

The values for lumber and plywood impregnated with approved fire-retardant chemicals, including fastener values, shall be submitted to the building official for approval. Submittal to the building official shall include all substantiating data. Such values shall be developed from approved test methods and procedures that consider potential strength-reduction characteristics, including the effects of elevated temperatures and moisture. Other adjustments are applicable, except that the impact load-duration factor shall not apply.

Values for glued-laminated timber, including fastener design values, shall be recommended by the treater and submitted to the building official for approval. Submittal to the building official shall include all substantiating data.

In addition to the requirements specified in Section 207, fire-retardant lumber having structural applications shall be tested and identified by an approved inspection agency in accordance with UBC Standard 23-5.

7. [For BSC] Sec. 5.4. Add a section as follows:

5.4.5 Ponding. Roof framing members shall be designed for the deflection and drainage or ponding requirements specified in Section 1506 and Chapter 16. In glued-laminated timbers, the minimum slope for roof drainage required by Section 1506 shall be in addition to a camber of one and one-half times the calculated dead load deflection. The calculation of the required slope shall not include any vertical displacement created by short taper cuts. In no case shall the deflection of glued-laminated timber roof members exceed 1/2-inch (13 mm) for a 5-pound-per-square-foot (239 Pa) uniform load.

8. [For BSC] Sec. 5.4. Add a new section as follows:

5.4.6 Tapered Faces. Sawn tapered cuts shall not be permitted on the tension face of any beam. Pitched or curved beams shall be so fabricated that the laminations are parallel to the tension face. Straight, pitched or curved beams may have sawn tapered cuts on the compression face.

For other members subject to bending, the slope of tapered faces, measured from the tangent to the lamination of the section under consideration, shall not be steeper than 1 unit vertical in 24 units horizontal (4% slope) on the tension side.

EXCEPTION: 1. This requirement does not apply to arches.

2. Taper may be steeper at sections increased in size beyond design requirements for architectural projections.

9. ~~[For BSC] Sec. 11.1.5.6. Delete and substitute as follows:~~

~~**11.1.5.6** For wood-to-wood joints, the spacing center-to-center of nails in the direction of stress shall not be less than the required penetration. Edge or end distances in the direction of stress shall not be less than one-half of the required penetration. All spacing and edge and end distances shall be such as to avoid splitting of the wood.~~

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

**CHAPTER 16
STRUCTURAL DESIGN**

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in 2001 CBC	Adopt entire chapter with amendments listed below	BSC	Comments
See Comments			Repeal all existing BSC adopted provisions for clarity
	1603.1.8 CA 1612.5 CA	X	

AMENDMENTS:

1603.1.8 Systems and components requiring special inspections for seismic resistance. Construction documents or specifications shall be prepared for those systems and components requiring special inspection for seismic resistance as specified in Section 1707.1 by the registered design professional responsible for their design and shall be submitted for approval in accordance with Section 106.1, Appendix Chapter 1. Reference to seismic standards in lieu of detailed drawings is acceptable.

1612.5 Flood hazard documentation. The following documentation shall be prepared and sealed by a registered design professional and submitted to the building official:

1. For construction in flood hazard areas not subject to high-velocity wave action:
 - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 109.3.3, Appendix Chapter 1. . . .
2. For construction in flood hazard areas subject to high-velocity wave action:
 - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 109.3.3, Appendix Chapter 1. . . .

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

**Chapter 17
Structural Tests and Special Inspection**

Adopt and/or codify entire chapter as amended below;

Currently Adopted Sections in 2001 CBC	Adopt entire chapter with amendments listed below	BSC	Comments
See Comments			Repeal all existing BSC adopted provisions for clarity
	1704.1.1 CA 1711.1 CA	X	

AMENDMENTS:

1704.1.1 Statement of special inspections. The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.1, Appendix Chapter I, as a condition for permit issuance. This statement shall be in accordance with Section 1705. . . .

1711.1 General. In the absence of approved rules or other approved standards, the building official shall make, or cause to be made, the necessary tests and investigations; or the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.11, Appendix Chapter I. The cost of all tests and other investigations required under the provisions of this code shall be borne by the permit applicant.

Notation

Authority: Health and Safety Code §§18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 18 SOILS AND FOUNDATIONS

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in 2001 CBC	Adopt entire chapter with amendments listed below	BSC	Comments
	1807.4.3 CA 1810.8.4.1 CA	X	

AMENDMENTS:

1807.4.3 Drainage discharge. The floor base and foundation perimeter drain shall discharge by gravity or mechanical means into an approved drainage system that complies with the ~~International~~ California Plumbing Code.

Exception: Where a site is located in well-drained gravel or sand/gravel mixture soils, a dedicated drainage system is not required.

1810.8.4.1 Seismic reinforcement. Where a structure is assigned to Seismic Design Category C, a permanent steel casing shall be provided from the top of the pile down 120 percent times the flexural length. The flexural

length shall be determined in accordance with Section 1808.1. Where a structure is assigned to Seismic Design Category D, E or F, the pile shall be considered as an alternative system. In accordance with Section 104.11, Appendix Chapter 1, the alternative pile system design, supporting documentation and test data shall be submitted to the building official for review and approval.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

Chapter 19 Concrete

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in the 2001 CBC	Adopt entire chapter without amendments	BSC	Comments
See Comments		X	Repeal all existing BSC adopted provisions for clarity

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 20 ALUMINUM

Adopt and/or codify entire chapter unamended.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 21 MASONRY

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in 2001 CBC	Adopt entire chapter with amendments listed below	BSC	Comments
	2113.11.1.2 CA 2113.15 CA	X	

AMENDMENTS:

2113.11.1.2 Gas appliances. Flue lining systems for gas appliances shall be in accordance with the ~~International Fuel Gas~~ California Mechanical Code.

2113.15 Flue area (appliance). Chimney flues shall not be smaller in area than the area of the connector from the appliance. Chimney flues connected to more than one appliance shall not be less than the area of the largest connector plus 50 percent of the areas of additional chimney connectors.

Exceptions: . . .

2. Chimney flues serving gas-fired appliances sized in accordance with the ~~International Fuel Gas~~ California Mechanical Code.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 22 STEEL

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in the 2001 CBC	Adopt entire chapter without amendments	BSC	Comments
See Comments			Repeal all existing BSC adopted provisions for clarity

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 23 WOOD

Adopt and/or codify entire chapter as amended below:

Currently Adopted Sections in the 2001 CBC	Adopt entire chapter with amendments listed below	BSC	Comments
See Comments			Repeal all existing BSC adopted provisions for clarity
	2304.5 CA 2503.1 CA		

AMENDMENTS:

2304.5 Framing around flues and chimneys. Combustible framing shall be a minimum of 2 inches (51 mm), but shall not be less than the distance specified in Sections 2111 and 2113 and the ~~International~~ California Mechanical Code, from flues, chimneys and fireplaces, and 6 inches (152 mm) away from flue openings.

2503.1 Inspection. Lath and gypsum board shall be inspected in accordance with Section 109.3.5, Appendix Chapter 1.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 24 GLASS AND GLAZING

Adopt and/or codify entire chapter unamended.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 25 GYPSUM BOARD AND PLASTER

Adopt and/or codify entire chapter unamended.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5

CHAPTER 26 PLASTIC

Adopt and/or codify entire chapter unamended.

Notation

Authority: Health and Safety Code §18928 & 18934.5

References: Health and Safety Code §§18928, 18928.1, & 18934.5